

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 6, 1997

MEMORANDUM FOR: G. W. Cunningham, Technical Director

FROM: J. Kent Fortenberry / Joe Sanders

SUBJECT: SRS Activity Report for Week Ending June 6, 1997

Randall Robinson and Dave Drop were onsite this week attending the ITP Chemical Panel meetings.

Actinide Packaging and Storage Facility (APSF) Design Status - The preliminary design for APSF should be 60% complete in mid-June. A WSRC design review is scheduled the week of July 14. WSRC is currently evaluating whether the cooling portion of the ventilation system (chillers, cooling towers, etc.) will need to be safety class in order to ensure that plutonium metal does not undergo a-b phase transition (at ~235 deg F), expand, and possibly rupture the container. In addition, WSRC is evaluating whether a 200 position cool-storage array for storing Pu-238 should be eliminated.

Misoperation of Distributed Control System (DCS) at DWPF - On Thursday, June 5th, while switching over from the Primary to the Backup Melter Offgas System, a Control Room Operator (CRO) inadvertently shut down the exhaust fan on the backup system (operating at the time). This occurred because the CRO selected the exhaust fan on the wrong "faceplate" (screen on the DCS). Since the supply fan was still running, the melter pressure went positive and pouring inadvertently initiated. Fortunately, a canister was in place. Approximately eight pounds of glass were poured before the situation was resolved. This incident was classified as an off-normal occurrence and is very similar to the misoperation documented in the weekly report from February 14th.

Dropped Fuel - A Mk-22 fuel assembly was dropped while relocating the most recent K-Reactor charge (K-14) within the K-Reactor Basin. The assembly was being handled vertically and through-wall corrosion at the upper end piece caused the drop. About half of the K-14 charge had already been relocated, leaving about 200 more assemblies to move. Visual inspection of the remaining fuel assemblies show corrosion conditions ranging from none to badly corroded. The remaining assemblies will be moved using an alternate handling method that should be less affected by end-piece corrosion. The K-14 charge is the first fuel scheduled to be processed in H- Canyon. All of the fuel in the K-Reactor Basin will be sent to H-Canyon by early 1999.